FIG. 1A

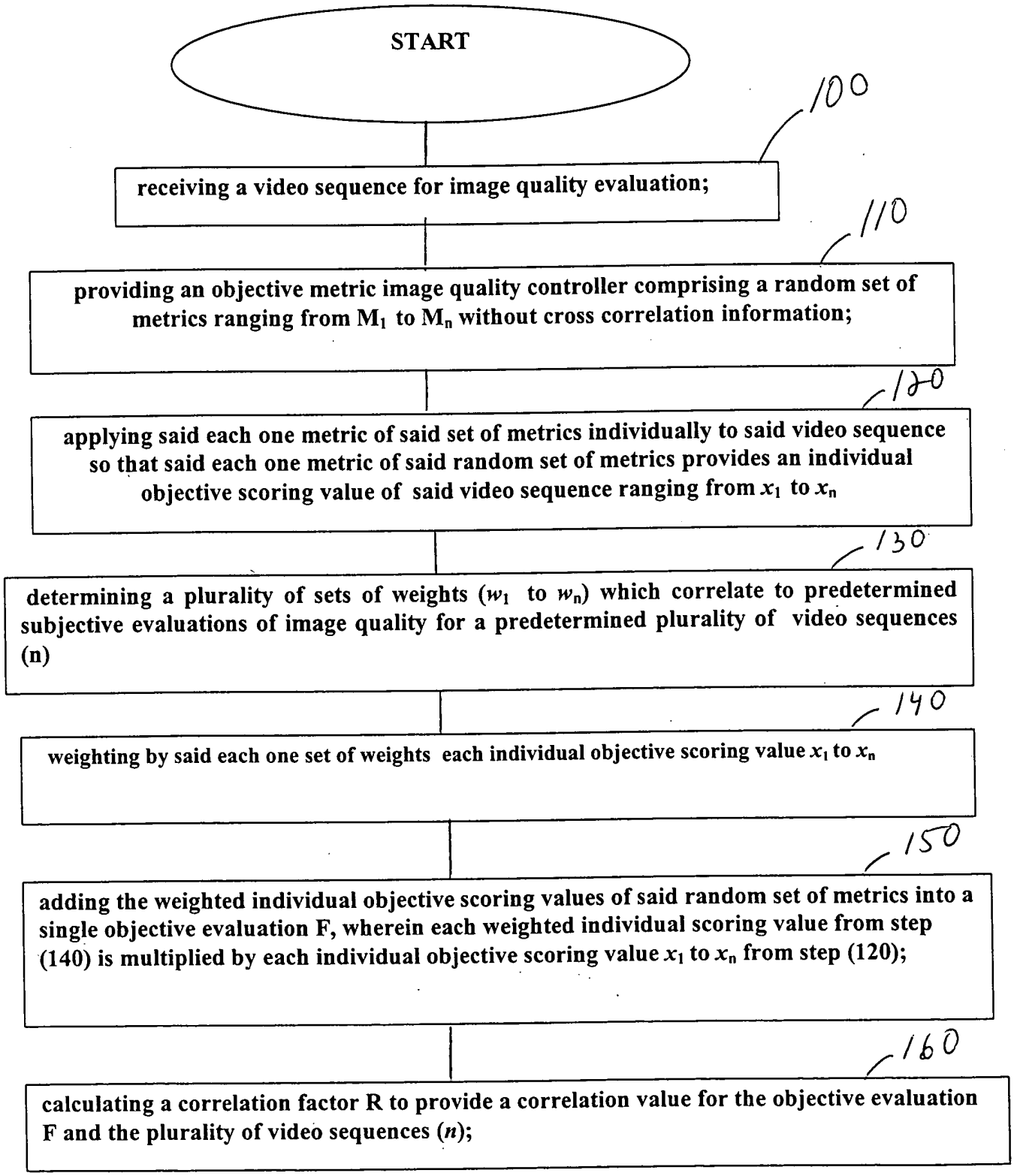

FIG. 1B

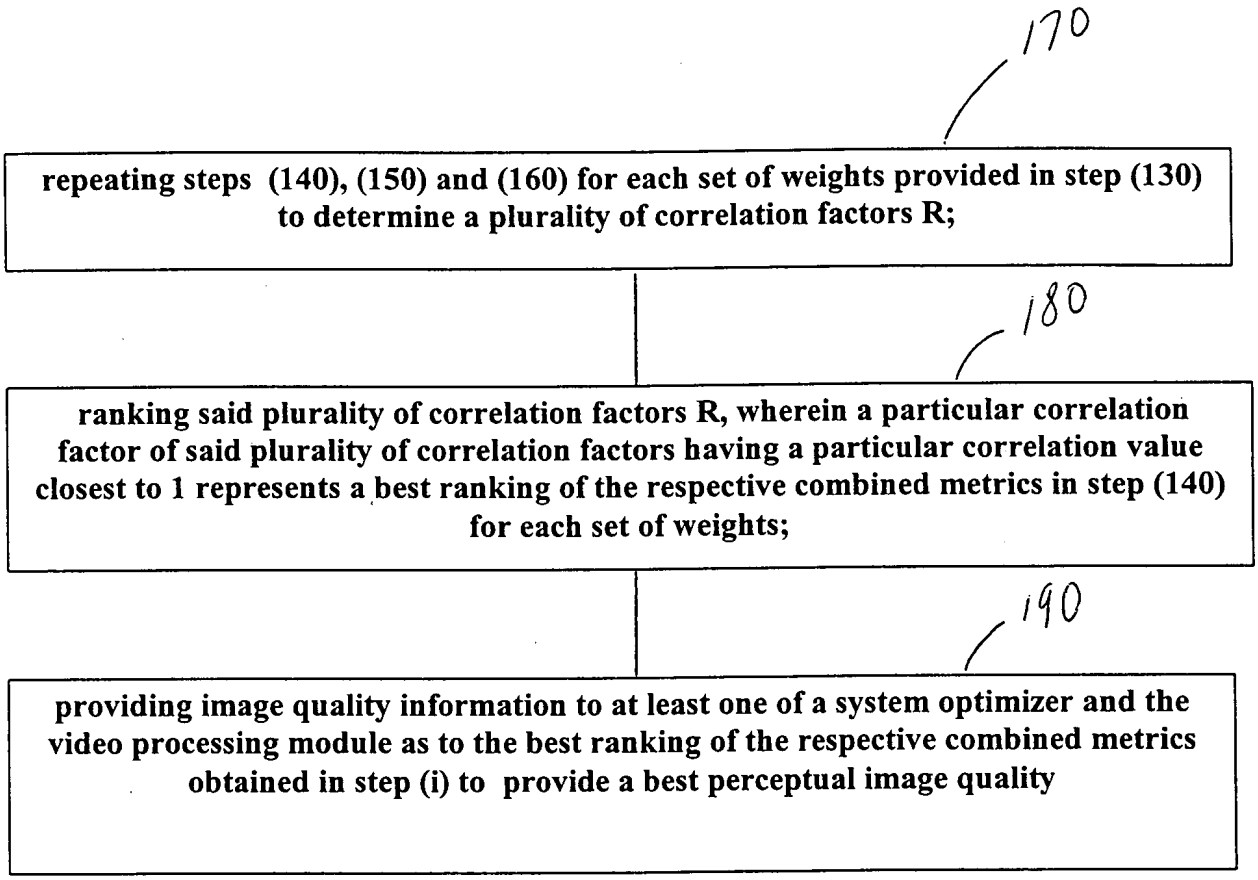

FIG. 1C

When a predetermined number of sets of metrics=n, the quadratic model to obtain the objective evaluation F is:

$F = (\sum_{i=1}^{n} w_i x_i)^2$, wherein " $_n$ " is a non-zero value.

FIG. 1D

when a number of the set of metrics =4, then the quadratic model to obtain the objective evaluation F is:

$$F = w1x1^2 + w2x2^2 + w3x3^2 + w4x4^2 + w5x1x2 + w6x1x3 + w7x1x4 + w8x2x3 + w9x2x4 + w10x3x4.$$

FIG. 1E

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selecting a best set of weights from the plurality of sets of weights provided in step (130), said best set of weights being heuristically determined by a genetic algorithm that increases dynamically a size of the assigned range of said each one set of weights provided in step (130).

FIG. 1F

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selecting a best set of weights from the plurality of sets of weights provided in step (130), said best set of weights being heuristically determined by a genetic algorithm that enables finding the best solution that maximizes the correlation factor R of the overall objective image quality F with the subjective evaluation without the need to carry out an exhaustive search to find the best set of weights.

FIG. 2

Calculating of the correlation factor R in step (160) by using a Spearman rank order comprising the following equation:

$$R=1-\frac{6*(X-Y)^{t}(X-Y)}{k(k^{2}-1)},$$

wherein X is equal to a vector of ranked *k* objective values for the *k* sequences (*k* * l), and

Y is equal to a vector of ranked *k* subjective evaluation for the *k* sequences (*k* * 1).

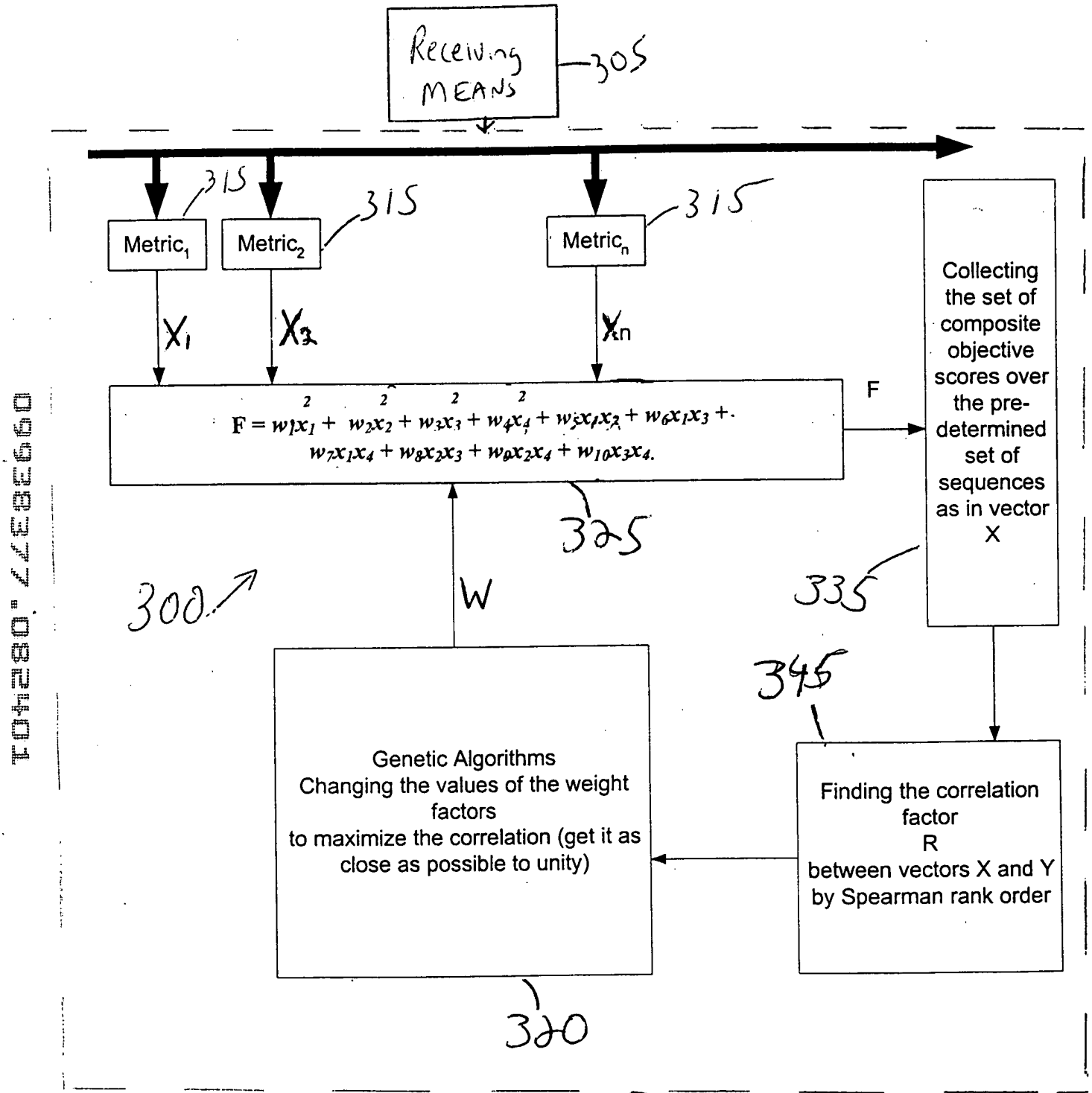
Receiving MEANS
305
315
315
315
Metric1
Metric2
Metricn
X1
X2
Xn
F = w1x1^2 + w2x2^2 + w3x3^2 + w4x4^2 + w5x1x2 + w6x1x3 + .
w7x1x4 + w8x2x3 + w9x2x4 + w10x3x4.
F
325
Collecting the set of composite objective scores over the pre-determined set of sequences as in vector X
335
300
W
345
Genetic Algorithms
Changing the values of the weight factors
to maximize the correlation (get it as close as possible to unity)
Finding the correlation factor
R
between vectors X and Y
by Spearman rank order
320

Fig. 3